Report of the Department of Mollusca.

The rearrangement of the general collection in exhibition cases has been almost completed, table-cases of gastropods having been worked over during the year. Considerable time has been given by Mr. Vanatta to the determination and description of Hawaiian mollusks sent by Mr. D. Thaanum, of Hilo, Hawaii, and to the work of picking out and assorting upwards of 500 trays of shells from material gathered by the Curator last year in the Florida Keys. Large quantities of leaves and forest débris, gathered by Mr. C. B. Moore, have also been picked over, and much valuable material, especially of very small mollusks, obtained.

Mr. Y. Hirase has continued to send Japanese and Formosan material; his latest sendings contain Korean mollusks, which hitherto have been almost unknown. About 100 new species have been described from this source during the year.

Other valuable accessions are a series of marine shells from the Great Barrier Reef, Australia, including cotypes of 19 new species, from Charles Hedley. A collection from northeastern Mexico, from A. A. Hinkley. A series of Irish slugs from Dr. R. F. Scharff, and many smaller accessions from numerous donors. A large part of this material has been worked up, and papers published thereon. The time of the special Curator has been largely occupied in the preparation of the Manual of Conchology, in which the families *Oleacinidæ* and *Fercussacidæ* have been described.

H. A. Pilsbry,
Special Curator, Dept. of Mollusca.

REPORTS OF THE SECTIONS.

The Biological and Microscopical Section.

The membership of the Section has changed but little during the year. Nine regular and several informal meetings have been held. On March 30, the fiftieth anniversary of the founding of the Biological and Microscopical Section was observed by a banquet held in the Section Room, at which were present regular and former members and the officers of the Academy. The Director, Dr. J. Cheston Morris, presided, and addresses were made by Dr. Samuel G. Dixon, Dr. George A. Piersol, Dr. Arthur E. Brown, Mr. Witmer Stone, Dr. Henry Skinner, Dr. James Tyson, Dr. Henry A. Pilsbry, Mr. F. J. Keeley and Mr. C. S. Boyer.

The communications made during the year may be briefly summarized as follows: Uses of the microscope in testing chemical preparations, by Dr. D. E. Owen; Leucocythemia, the Tsetze Fly and various contagious diseases, by Dr. T. S. Stewart; opaque illumination and numerous other subjects, by Mr. F. J. Keeley; miscellaneous objects exhibited and described by Mr. William B. Davis; new and rare forms of diatomaceæ, by Mr. C. S. Boyer; rare forms of diatoms from Barbadoes, by Mr. J. A. Shulze; the organisms contained in various infusions, by Mr. John G. Rothermel; other communications, by Mr. T. C. Palmer, Mr. W. H. Van Sickel and Mr. Hugo Bilgram.

The officers elected for the year 1909 are as follows:

Director,	J. Cheston Morris, M.D.
Vice-Director,	T. Chalkley Palmer.
Conservator,	F. J. Keeley.
Recorder,	C. S. Boyer.
Corresponding Secretary,	S. L. Schumo.
Treasurer,	Thomas S. Stewart, M.D.

CHARLES S. BOYER,
Recorder.

ENTOMOLOGICAL SECTION.

During the present year ten meetings of the Entomological Section have been held with an average attendance of ten persons. As usual the large number of additions to the cabinet has necessitated the greatest amount of work in the department. The large collection of American butterflies made by Dr. Henry Skinner, numbering over 10,000 specimens, was purchased by the Academy. Dr. F. D. Godman has presented 3,529 Coleoptera, representing 1,140 species, from the *Biologia Centrali-Americana* collection, a most valuable addition. One hundred and eighty-four insects from Burma were purchased from W. Crumb. Dr. Henry Skinner presented 56 Lepidoptera from various parts of the United States. Seven hundred Orthoptera were collected by the Academy expedition to Virginia and North Carolina, conducted by Mr. J. A. G. Rehn. About five hundred Orthoptera were presented by Witmer Stone, Morgan Hebard and J. A. G. Rehn, from Pennsylvania and New Jersey. One hundred and fifty-four Brazilian Orthoptera were purchased from C. F. Baker. Two hundred Diptera from British Guiana were received from Charles T. Greene. In all over 16,000 specimens of insects were added to the collection. Two hundred Schmitt boxes and four Brock tin cases were purchased.

The large collection of North American Hymenoptera has been rearranged and some work done preparatory to the rearrangement of the Micro-lepidoptera. All the determined Diptera, except a few of the family Muscidæ, have been arranged in Schmitt boxes and many genera and species new to the collection were determined. All of Osten-Sacken's types of Tipulidæ and Tabanadæ were marked and numbered. In the order Orthoptera, reports were completed on the specimens collected in Arizona in 1907 by Rehn and Hebard. Considerable rearrangement has been done in the study series. Dr. P. P. Calvert has continued his important work on the collection of Odonata and has finished his contribution to the pages of the *Biologia Centrali-Americana*. A large number of Coleoptera has been incorporated into the collection, including some interesting material from Fort Wingate, New Mexico. The JOURNAL of the Section, *Entomological News*, has been continued and volume nineteen completed with 500 pages and 25 plates. Two Associates were elected and one member died.

The following were elected to serve as officers for the year 1909:

Director,	Philip Laurent.
Vice-Director,	H. W. Wenzel.
Treasurer,	E. T. Cresson.
Recorder,	Henry Skinner.
Secretary,	E. T. Cresson, Jr.
Conservator,	Henry Skinner.
Publication Committee,	E. T. Cresson,
	E. T. Cresson, Jr.

Respectfully submitted,

HENRY SKINNER, M.D.

BOTANICAL SECTION.

During the year further progress has been made in placing the specimens in species covers, and it is hoped to complete this important work at an early date.

The additions to the Herbarium consist of the Herbst collection of Fungi, numbering more than 5,000 specimens, being the life-work of Dr. William Herbst, of Trexlertown, Pa., and presented to the Academy by Mrs. Herbst; a collection of Pennsylvania Flowering Plants and Ferns numbering about 2,000 specimens, presented by Dr. H. D. Heller, of Hellertown, Pa.; presentations from various members numbering about 200 specimens; a small collection of Rubus, Amelanchier and Betula, purchased by the Section from Mr. W. H. Blanchard, and a collection of 930 specimens of Balkan Plants, purchased by the Academy.

The Conservator spent about a month in the Bermudas during February and March of the present year, by the aid of a grant from the Esther Hermann Research Fund of the New York Academy of Sciences, when collections of over 800 herbarium specimens were made. During the summer, through the liberality of Mrs. Charles Schäffer and Miss Mary W. Adams, he was enabled to make further studies of the flora of the Canadian Rocky Mountains, ten weeks being spent in the region about the headwaters of the Saskatchewan and Athabasca Rivers, when collections of more than 3,000 herbarium specimens were made, including a number of probably new species. Owing to the pressure of other duties it has not been possible to yet give this collection critical study.

The activity manifested in previous years by the members of the Philadelphia Botanical Club has been maintained during the past season, more than 2,000 specimens being added to the local herbarium, including a number of species not previously recorded as occurring in the region. Mr. Samuel S. Van Pelt has continued his valuable services during the year as Curator of this important and rapidly growing section of the herbarium.

At the annual meeting of the Section, the following officers were elected for the year:

Director,	Benjamin H. Smith.
Vice-Director,	Joseph Crawford.
Recorder,	Charles S. Williamson.
Treasurer and Conservator,	Stewardson Brown.

Respectfully submitted.

Stewardson Brown,
Conservator.

Mineralogical and Geological Section.

The Section has this year held eight meetings (besides the December meeting yet to come), with an average attendance of about ten. Communications were made by Prof. Amos P. Brown, on ripple marks, tracks and trails; by Mr. Edgar T. Wherry, on two new antholite dikes in Philadelphia County, and on the geology of the neighborhood of Jacksonwald, Berks County; by Dr. W. J. Sinclair, on the geology of a portion of the Grand Canyon of the Colorado River; by Prof. B. L. Miller, on the geology of the Allentown quadrangle, compared with the Philadelphia region; by Mr. Gilbert Van Ingen, on the geology of the area drained by the upper Susquehanna River; by Mr. J. F. Vanarts-

dalen, on silicified wood in the Norristown shales of Bucks County; by Prof. O. C. S. Carter, on tubular concretions, sheets and plates of Pensauken gravel, cemented with iron hydroxide; by Col. Joseph Willcox, on the geology and mineralogy of St. Lawrence County, New York; and there were a number of shorter communications and various discussions.

There were ten field excursions, with an average attendance of 25. The excursions visited: (1) The copper deposits of Upper Salford and Frederick Townships in Montgomery County; (2) The crystalline schists and limestones between Alton and Glen Hall, in Chester County; (3) the New Red traps and shales between Quakertown and Perkasie, in Bucks County; (4) the region of Bethlehem, in Northampton and Lehigh Counties; (5) the New Red traps and shales in northern Bucks County; (6) the silicified wood of the New Red and the minerals of the crystalline rocks between Woodbourne and Neshaminy Falls, in Bucks County; (7) the Cretaceous and Pleistocene formations near Pensauken Creek, in Camden and Burlington Counties, New Jersey; (8) the trap at Aldham, Chester County, and the Cambrian Sandstone thence to Valley Forge; (9) the crystalline rocks and their minerals near Lansdowne and up Darby Creek, Delaware County; (10) the cross-section of the Chester Valley, from Devault to Malvern, Chester County.

Three associate members have been added to the Section.

The following officers of the Section have been elected for the coming year:

Director,	Benjamin Smith Lyman.
Vice-Director,	George Vaux, Jr.
Recorder and Secretary,	Silas L. Schumo.
Treasurer,	Miss Emma Walter.
Conservator,	Frank J. Keeley.

Respectfully submitted,

BENJAMIN SMITH LYMAN,

Director.

ORNITHOLOGICAL SECTION.

Since the last annual report the Ornithological Department of the Academy has been removed from its old quarters to the top floor of the Museum building—a far more desirable location, well lighted and with ample space for the growth of the collections.

New racks have been erected to hold the cases and the latter have

been arranged in systematic order. Many cases of large birds formerly stored elsewhere have been placed in their proper position, so that the entire study series of birds is now for the first time brought together where it is readily accessible.

Mr. Rehn finished the cataloguing and relabelling of the Tristram collection during the year, and this material, numbering 6,180 skins, together with several smaller collections, has been distributed in the general series.

Ten large wooden cabinets were secured for the accommodation of the Anatidæ and other large birds formerly arranged in temporary cases.

The labelling of the mounted birds was resumed early in the year, and all the specimens, with the exception of the song birds, are now labelled with technical and vernacular names and locality. Owing to the alterations to the building some of the exhibition cases had to be taken down or altered, so that the collection has been temporarily disarranged, but the erection of new cases will soon permit of their proper display. Many specimens of interest were secured during the year, the most important being the Van der Pol collection of East Indian birds, comprising 1,070 specimens, representing many species not heretofore in the Academy's collection.

The Delaware Valley Ornithological Club and the Pennsylvania Audubon Society have continued to hold their meetings in the building and have done much to maintain activity in this department. In December, 1907, the American Ornithologists' Union held its twenty-fifth annual meeting at the Academy, which in point of attendance and interest was the most successful ever held.

The officers of the Section for the ensuing year are:

Director,	Spencer Trotter, M.D.
Vice-Director,	George Spencer Morris.
Secretary,	William A. Shryock.
Recorder,	Stewardson Brown.
Treasurer and Conservator,	Witmer Stone.

WITMER STONE,
Conservator.

The annual election of Officers, Councillors and Members of the Committee on Accounts to serve during 1909 was held, with the following result:

PRESIDENT,	Samuel G. Dixon, M.D.
VICE-PRESIDENTS,	Arthur Erwin Brown, Sc.D., Edwin G. Conklin, Ph.D.
RECORDING SECRETARY,	Edward J. Nolan, M.D.
CORRESPONDING SECRETARY,	J. Percy Moore, Ph.D.
TREASURER,	George Vaux, Jr.
LIBRARIAN,	Edward J. Nolan, M.D.
CURATORS,	Arthur Erwin Brown, Sc.D., Samuel G. Dixon, M.D., Henry A. Pilsbry, Sc.D., Witmer Stone.
COUNCILLORS TO SERVE THREE YEARS,	Charles B. Penrose, M.D., Charles Morris, Henry Tucker, M.D., Spencer Trotter, M.D.
COMMITTEE ON ACCOUNTS,	Charles Morris, Samuel N. Rhoads, Dr. C. Newlin Peirce, John G. Rothermel, Howard Crawley, Ph.D.

COUNCIL FOR 1909.

Ex-officio.—Samuel G. Dixon, M.D., Edwin G. Conklin, Ph.D., Arthur E. Brown, Sc.D., Edward J. Nolan, M.D., J. Percy Moore, Ph.D., George Vaux, Jr., Henry A. Pilsbry, Sc.D., Witmer Stone.

To serve Three Years.—Charles B. Penrose, M.D., Charles Morris, Henry Tucker, M.D., Spencer Trotter, M.D.

To serve Two Years.—Thomas H. Fenton, M.D., John Cadwalader, Edwin S. Dixon, Henry Skinner, M.D.

To serve One Year.—Dr. C. Newlin Peirce, Philip P. Calvert, Ph.D., Thomas Biddle, M.D., and Frederick Prime.